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EXAMINER

HO, CHUONG T

ART UNIT

PAPER NUMBER

2616

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/05/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

09/589,038

Applicant(s)

MO ET AL.

Examiner

CHUONG T. HO

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on pre-appeal brief 05/02/06.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,5-10,19 and 22-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,5-10,19,22-24 and 26-29 is/are rejected.
- 7) ☒ Claim(s) 25 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date. _____ | 6) <input type="checkbox"/> Other: _____ |

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1. The pre-appeal brief filed 05/02/06 have been entered and made of record.
2. Applicant's pre-appeal brief filed 05/02/06 with respect to claims 1, 5-10, 19, 22-29 have been considered but are moot in view of the new ground(s) of rejection.

Drawings

3. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because figures 2, 3 are not clear how generating a second protection path from each of the nodes to the destination node, the second protection path distinct from the first protection path such that the first and second protection paths do not have any common **nodes** or **links**. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.
4. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.
5. Claims 1, 5-10, 19, 22-29 are pending.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1, 5-7, 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over de Boer et al. (U.S. Patent No. 6,259,837) in view of Walrand et al. (U.S. Patent No. 6,711,125).

In the claim 1, de Boer et al. discloses generating a first protection path (see figure 4, figure 5, protection path "P" in the first ring 50) from each of the nodes (figure 4, figure 5, NE1- NE7) to a destination node (figure 4, figure 5, NE1 – NE7) (see col. 2, lines 13-17, col. 3, lines 10-17, col. 5, lines 10-25);
generating a second protection path (see figure 4, figure 5, protection path "P" in the second ring 52) from each of the nodes (figure 4, figure 5, NE8- NE12) to the destination node (figure 4, figure 5, NE1 – NE7), the second protection path (see figure 4, figure 5, protection path "P" in the second ring 52) distinct from the first protection path (see figure 4, figure 5, protection path "P" in the first ring 50) such that the first (see figure 4, figure 5, protection path "P" in the first ring 50) and second protection paths (see figure 4, figure 5, protection path "P" in the second ring 52) do not have any common **nodes** or **links** (see figures 4, 5, col. 2, lines 13-17, col. 3, lines 10-17, col. 5, lines 10-25);
wherein generating the first protection path (see figure 4, figure 5, protection path "P" in the first ring 50) and generating the second protection path (see figure 4, figure 5, protection path "P" in the first ring 52) each comprising decomposing the telecommunication network into a ring and at least one ear (figure 4, figure 5, 50, 52).

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However, de Boer et al. are silent disclosing connectionless signals in a telecommunications network comprising a plurality of nodes.

Walrand et al. discloses generating a protection path (p1-backup 708) for connectionless (connectionless signals includes IP or lpx or SNA) (see col. 2, lines 50-55) signals from each of the nodes (each nodes z1, z2, z3, z4, z6, see col. 9, lines 1-10) to a destination node (z5) (see figure 7, col. 9, lines 1-10);

Both de Boer et al. and Walrand disclose the first protection path and the second protection path which do not have any common links. De Boer et al. recognizes generating the first protection path and generating the second protection path each comprise decomposing the telecommunications network into a ring and at least one ear. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of de Boer et al. with the teaching of Walrand to provide the first protection path and generating the second protection path each comprise decomposing the telecommunications network into a ring and at least one ear in order to increase network efficiency.

8. In the claim 19, de Boer et al. discloses generating a first protection path (see figure 4, figure 5, protection path "P" in the first ring 50) from each of the nodes (figure 4, figure 5, NE1- NE7) to a destination node (figure 4, figure 5, NE1 – NE7) (see col. 2, lines 13-17, col. 3, lines 10-17, col. 5, lines 10-25);

generating a second protection path (see figure 4, figure 5, protection path "P" in the second ring 52) from each of the nodes (figure 4, figure 5, NE8- NE12) to the destination node (figure 4, figure 5, NE1 – NE7), the second protection path (see figure

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4, figure 5, protection path "P" in the second ring 52) distinct from the first protection path (see figure 4, figure 5, protection path "P" in the first ring 50) such that the first (see figure 4, figure 5, protection path "P" in the first ring 50) and second protection paths (see figure 4, figure 5, protection path "P" in the second ring 52) do not have any common **nodes** or **links** (see figures 4, 5, col. 2, lines 13-17, col. 3, lines 10-17, col. 5, lines 10-25);

wherein generating the first protection path (see figure 4, figure 5, protection path "P" in the first ring 50) and generating the second protection path (see figure 4, figure 5, protection path "P" in the first ring 52) each comprising decomposing the telecommunication network into a ring and at least one ear (figure 4, figure 5, 50, 52).

However, de Boer et al. are silent disclosing connectionless signals in a telecommunications network comprising a plurality of nodes.

Walrand et al. discloses generating a protection path (p1-backup 708) for connectionless (connectionless signals includes IP or lpx or SNA) (see col. 2, lines 50-55) signals from each of the nodes (each nodes z1, z2, z3, z4, z6, see col. 9, lines 1-10) to a destination node (z5) (see figure 7, col. 9, lines 1-10);

Both de Boer et al. and Walrand disclose the first protection path and the second protection path which do not have any common links. De Boer et al. recognizes generating the first protection path and generating the second protection path each comprise decomposing the telecommunications network into a ring and at least one ear. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of de Boer et al. with the teaching of Walrand to provide

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the first protection path and generating the second protection path each comprise decomposing the telecommunications network into a ring and at least one ear in order to increase network efficiency.

9. In the claim 5, de Boer et al. disclose decomposing the telecommunications network further comprising charting the ring horizontally beginning with the destination and ending with destination node (see figure 6, col. 2, lines 13-17, col. 3, lines 10-17, col. 5, lines 10-25) (the ring 50 is charted horizontally above the ring 52);.

10. In the claim 6, de Boer et al. discloses decomposing the telecommunications network further comprising ordering the ears and charting the ears horizontally based on the order of the ears (see figure 6, col. 2, lines 13-17, col. 3, lines 10-17, col. 5, lines 10-25).

11. In the claim 7, de Boer et al. discloses generating the first protection path further comprising generating the first protection path in a first direction based on the charted ring and ears and generating the second protection path further comprising generating the second protection path in a second direction based on the charted ring and ears (see figure 6, col. 2, lines 13-17, col. 3, lines 10-17, col. 5, lines 10-25).

12. Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combined system (de Boer - Walrand) in view of Uphadya et al. (U.S.Patent No. 5,949,755).

In the claim 8, the combined system (de Boer - Walrand) discloses the limitations of claim 1 above.

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However, the combined system (de Boer - Walrand) is silent to disclosing classifying received traffic as working traffic or protection traffic.

Uphadya et al. discloses classifying received traffic as working traffic or protection traffic (see figure 4, col. 4, lines 57-67).

Both de Boer, Walrand, and Uphadya discloses the protection path. Uphadya recognizes classifying received traffic as working traffic or protection traffic. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined system (de Boer - Walrand) with the teaching of Uphadya to classify received traffic as working traffic or protection traffic in order to improve the network more efficiency.

13. In the claim 9, the combined system (de Boer - Walrand) discloses the limitations of claim 1 above.

However, the combined system (de Boer - Walrand) is silent to disclosing routing protection traffic further comprising routing along the first protection path the protection traffic received on the first protection path and routing along the second protection path the protection traffic received on the second protection path.

Uphadya et al. discloses routing protection traffic further comprising routing along the first protection path the protection traffic received on the first protection path and routing along the second protection path the protection traffic received on the second protection path (see figure 4, col. 4, lines 57-67).

Both de Boer, Walrand, and Uphadya discloses the protection path. Uphadya recognizes routing protection traffic further comprising routing along the first protection

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path the protection traffic received on the first protection path and routing along the second protection path the protection traffic received on the second protection path. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined system (de Boer - Walrand) with the teaching of Uphadya to route protection traffic further comprising routing along the first protection path the protection traffic received on the first protection path and routing along the second protection path the protection traffic received on the second protection path in order to improve the network more efficiency

14. In the claim 10, the combined system (de Boer - Walrand) discloses the limitations of claim 9 above.

However, the combined system (de Boer - Walrand) is silent to disclosing determining which of the first and second protection paths to the destination node comprises a shorter path; and routing received working traffic as protection traffic onto the protection path comprising the shorter path.

Uphadya et al. discloses determining which of the first and second protection paths to the destination node comprises a shorter path; and routing received working traffic as protection traffic onto the protection path comprising the shorter path (see figure 4, col. 4, lines 57-67).

Both de Boer, Walrand, and Uphadya discloses the protection path. Uphadya recognizesdetermining which of the first and second protection paths to the destination node comprises a shorter path; and routing received working traffic as protection traffic onto the protection path comprising the shorter path. Thus, it would have been obvious

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to one of ordinary skill in the art at the time of the invention to modify the combined system (de Boer - Walrand) with the teaching of Uphadya to determine which of the first and second protection paths to the destination node comprises a shorter path; and routing received working traffic as protection traffic onto the protection path comprising the shorter path in order to improve the network more efficiency.

15. Claims 22-24, 26-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combined system (de Boer - Walrand) in view of Uphadya et al. (U.S. Patent No. 5,949,755).

In the claim 22, the combined system (de Boer - Walrand) discloses the limitations of claim 19 above.

However, the combined system (de Boer - Walrand) is silent to disclosing each of nodes comprising at least two ports, each port operable to receive and transmit traffic for the node and a protection egress port identifier operable to identify one of the port as a protection egress port for a specified ingress port and a specified destination node, the protection egress port operable to transmit protection traffic received at the specified ingress port for the specified destination node.

Uphadya discloses each of nodes (A, B, C, D, E) comprising at least two ports, each port operable to receive and transmit traffic for the node and a protection egress port identifier operable to identify one of the ports as a protection egress port for a specified ingress port and a specified destination node, the protection egress port operable to transmit protection traffic received at the specified ingress port for the specified destination node (see figure 4, 5, col. 4, lines 56-67).

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined system (de Boer - Walrand) with the teaching of Uphadya to provide at least two ports (each of nodes), each port operable to receive and transmit traffic for the node in order to identify one of the ports as a protection egress port for a specified ingress port and a specified destination node, the protection egress port operable to transmit protection traffic received at the specified ingress port for the specified destination node. Therefore, the combined system would have been enable the node to be re-routed the traffic to another available egress protection port (a failure occurs on the working egress port).

16. In the claim 23, the combined system (de Boer - Walrand) discloses the limitations of claim 22 above.

However, the combined system (de Boer - Walrand) is silent to disclosing an egress port evaluator operable to evaluate a status for each of the nodes.

Uphadya discloses an egress port evaluator operable to evaluate a status for each of the nodes (see figure 4, 5, col. 4, lines 45-67).

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined system (de Boer - Walrand) with the teaching of Uphadya to provide an egress port evaluator operable to evaluate a status for each of the nodes in order to identify one of the ports as a protection egress port for a specified ingress port and a specified destination node, the protection egress port operable to transmit protection traffic received at the specified ingress port for the specified destination node. Therefore, the combined system would have been enable the node to

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be re-routed the traffic to another available egress protection port (a failure occurs on the working egress port).

17. In the claim 24, the combined system (de Boer - Walrand) discloses the limitations of claim 23 above.

However, the combined system (de Boer - Walrand) is silent to disclosing each of the nodes further comprising an egress port selector operable to select an egress port for transmitting traffic for the node.

Uphadya discloses each of the nodes further comprising an egress port selector operable to select an egress port for transmitting traffic for the node (see figure 4, 5, col. 4, lines 45-67).

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined system (de Boer - Walrand) with the teaching of Uphadya to provide each of the nodes further comprising an egress port selector operable to select an egress port for transmitting traffic for the node in order to identify one of the ports as a protection egress port for a specified ingress port and a specified destination node, the protection egress port operable to transmit protection traffic received at the specified ingress port for the specified destination node. Therefore, the combined system would have been enable the node to be re-routed the traffic to another available egress protection port (a failure occurs on the working egress port).

18. In the claim 26, the combined system (de Boer - Walrand) discloses the limitations of claim 24 above.

However, the combined system (de Boer - Walrand) is silent to disclosing each of the nodes further comprising a working traffic egress port identifier (see figure 3) operable to identify one of the ports as a working traffic egress port for a specified ingress port and a specified destination node, the working traffic egress port operable to transmit working traffic received at the specified ingress port for the specified destination node.

Uphadya discloses each of the nodes further comprising a working traffic egress port identifier (see figure 3) operable to identify one of the ports as a working traffic egress port for a specified ingress port and a specified destination node, the working traffic egress port operable to transmit working traffic received at the specified ingress port for the specified destination node (see figure 4, 5, col. 4, lines 45-67).

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined system (de Boer - Walrand) with the teaching of Uphadya to provide each of the nodes further comprising a working traffic egress port identifier (see figure 3) operable to identify one of the ports as a working traffic egress port for a specified ingress port and a specified destination node, the working traffic egress port operable to transmit working traffic received at the specified ingress port for the specified destination node in order to identify one of the ports as a protection egress port for a specified ingress port and a specified destination node, the protection egress port operable to transmit protection traffic received at the specified ingress port for the specified destination node. Therefore, the combined system would have been

enable the node to be re-routed the traffic to another available egress protection port (a failure occurs on the working egress port).

19. In the claim 27, the combined system (de Boer - Walrand) discloses the limitations of claim 26 above.

However, the combined system (de Boer - Walrand) is silent to disclosing each of nodes further comprising a secondary protection egress port identifier operable to identify one of the ports as a secondary protection egress port for a specified destination node, the secondary protection egress port operable to transmit as protection traffic the working traffic received at the node for the specified destination node.

Uphadya discloses each of nodes further comprising a secondary protection egress port identifier operable to identify one of the ports as a secondary protection egress port for a specified destination node, the secondary protection egress port operable to transmit as protection traffic the working traffic received at the node for the specified destination node (see figure 4, 5, col. 4, lines 45-67).

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined system (de Boer - Walrand) with the teaching of Uphadya to provide each of nodes further comprising a secondary protection egress port identifier operable to identify one of the ports as a secondary protection egress port for a specified destination node, the secondary protection egress port operable to transmit as protection traffic the working traffic received at the node for the specified destination node in order to identify one of the ports as a protection egress port for a

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specified ingress port and a specified destination node, the protection egress port operable to transmit protection traffic received at the specified ingress port for the specified destination node. Therefore, the combined system would have been enable the node to be re-routed the traffic to another available egress protection port (a failure occurs on the working egress port).

20. In the claim 28, the combined system (de Boer - Walrand) discloses the limitations of claim 27 above.

However, the combined system (de Boer - Walrand) is silent to disclosing classifying received traffic as working traffic or protection traffic.

Uphadya et al. discloses classifying received traffic as working traffic or protection traffic (see figure 4, col. 4, lines 57-67).

Both de Boer, Walrand, and Uphadya discloses the protection path. Uphadya recognizes classifying received traffic as working traffic or protection traffic. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined system (de Boer - Walrand) with the teaching of Uphadya to classify received traffic as working traffic or protection traffic in order to improve the network more efficiency.

21. In the claim 29, the combined system (de Boer - Walrand) discloses the limitations of claim 28 above.

However, the combined system(de Boer - Walrand) is silent to disclosingthe egress port selector operable to select an egress port for transmitting traffic for the node based

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on the classification of the received traffic as working traffic or protection traffic and based on the status of the egress ports.

Uphadya et al. discloses the egress port selector operable to select an egress port for transmitting traffic for the node based on the classification of the received traffic as working traffic or protection traffic and based on the status of the egress ports (see figure 4, col. 4, lines 57-67).

Both de Boer, Walrand, and Uphadya discloses the protection path. Uphadya recognizes the egress port selector operable to select an egress port for transmitting traffic for the node based on the classification of the received traffic as working traffic or protection traffic and based on the status of the egress ports. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined system (de Boer - Walrand) with the teaching of Uphadya to provide the egress port selector operable to select an egress port for transmitting traffic for the node based on the classification of the received traffic as working traffic or protection traffic and based on the status of the egress ports in order to improve the network more efficiency.

Allowable Subject Matter

22. Claim 25 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHUONG T. HO whose telephone number is (571) 272-3133. The examiner can normally be reached on 8:00 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

01/23/07



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